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EXAMINER

CHUNG, JASON J

ART UNIT PAPER NUMBER

2611

DATE MAILED: 07/27/2004

27

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/526,100

Applicant(s)

SHEPPARD ET AL.

Examiner

Jason J. Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/20/04 has been entered.

Response to Arguments

Applicant's arguments filed 5/20/04 with respect to claims 39-45 and similar claims have been fully considered but they are not persuasive.

The double patenting arguments are invalid since the applicant believes that this application is in condition for allowance, however the examiner has proven that this application is not in condition for allowance. The examiner maintains the previous double patenting rejection mailed 1/20/2004.

The applicant argues on page 15 of the response that the rejection under section 102 using the Martinez reference fails to anticipate the recited claims. The applicant argues on pages 15-16 of the response that Martinez does not have a bias switch that is connected to the optical receiver in response to a pulse train generated by the optical receiver since the AND gate is not a bias switch and turns on and off in response from the TDM slot selector, the oscillator is not connected to the bias switch and does not turn on and off in response the the and gate, and the isolator is not a diplexer filter. The examiner respectfully disagrees with this assertion. Martinez

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discloses the IR module 24 (optical receiver) sends the optical signal to an AND gate 59 (bias switch) and the signal is sent to the modulator 65 and oscillator 63 (column 9, lines 8-20, figure 6); the combination of the modulator 65, oscillator 63, and crystal 61 reads on the claimed oscillator that modulates a signal to produce an RF signal. The AND gate receives pulse trains from the optical receiver 24 that are logic high "1's" and output the logic high to the modulator 65 (part of the claimed oscillator) and the modulator 65, oscillator 63, and crystal 61 responds to the logic high pulse train and convert the signal into an electrical signal, which meets the limitation on the bias switch and the oscillator coupled to the bias switch. The AND gate is connected to the optical receiver via the microprocessor. An AND gate will output a logic high '1' when all the inputs are logic high. Thus, the AND gate 59 switches on and off IN RESPONSE to the pulse train going that is initially input into the microprocessor and then output from the microprocessor. Both the oscillator 63 and the crystal 61 are connected to the oscillator via modulator 65. Thus, when the AND gate 59 outputs a logic high to the modulator, both the crystal and oscillator switch on and generate an RF carrier for the viewer response signal. Martinez discloses the viewer response message is applied to the modulator which in turn transmits that message on cable 7 via isolator 47 and coupler and both the oscillator 63 and crystal 61 generate the RF carrier for that viewer response (column 9, lines 13-20); the RF carrier being generated enables the isolator 47 and coupler to inject the RF signal onto the media and thus meets the limitation of the diplexer filter by performing the function of the stated diplexer filter. Claims 41 and 43, which depend on claim 39 are therefore not allowable as stated by the applicant.

The applicant argues on pages 16-27 of the response that the residential gateway (converter 34) may be located outside the house as stated in Hamlin (column 3, lines 8-9). Applicant's arguments with respect to the claims on pages 16-27 of the response have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

The examiner maintains the previous double patenting rejection mailed 1/20/2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 9, 16, 21, 22, 24, 25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehreth (US Patent # 6,286,142) in view of Schultheiss (US Patent # 6,208,384) in further view of Hamlin (US Patent # 5,574,964).

Regarding claim 1, Ehreth discloses a communications controller 30 (residential gateway) the television set 100 that is by itself, which meets the limitation on one location and television sets located in remote site 104, each television has a channel selector and signaling unit 50 associated with it (column 2, line 59-column 3, line 10 and figure 1), which meets the limitation on another location. The television by itself is close in proximity to the residential gateway, whereas the televisions in remote site 104 are remotely located.

Ehreth discloses the channel selector and signaling unit receives signals from remote selector 70 (remote control) (column 3, line 65-column 4, line 12).

Ehreth discloses the video signal is received from a telecommunications network (column 1, lines 44-60).

Ehreth discloses the communications controller 30 (residential gateway) receives the video signal from the drop cable (column 3, lines 11-34), which meets the limitation on transporting.

Ehreth discloses the communications controller 30 (residential gateway) has an upstream signaling receiver that receives channel select commands and transmits the selected video signal to the appropriate television set (column 3, lines 35-50 and column 4, lines 44-62), which meets the limitation on processing and transmitting.

Ehreth discloses the broadband/narrowband network receives the data and the video signal for distribution to the television sets 100 through communications controller (residential gateway) and the communications controller sends all or only those video signals requested by the communications controller 30 (column 3, lines 10-34). Ehreth discloses the bi-directional arrow from the upstream signaling receiver 80 and the network interface 32 (figure 1). Thus, the channel select command is sent from the user's remote control 70 to the channel selector and signaling unit 50, upstream on network 90, to the communications controller 30, and the communications controller receives the appropriate signals from the broadband/narrowband network 40, which meets the limitation on video signals corresponding to channel select commands. Ehreth discloses receiving channel select commands and suggests receiving the

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channel select commands directly at the residential gateway by disclosing that the remote selector may be used in other suitable signal transmission media (column 4, lines 8-12).

Ehreth fails to disclose the channel select command received directly by a receiver within the residential gateway. Schultheiss discloses the personal computer may receive cable, Internet, or satellite signals (column 7, line 63-column 8, line 2). Schultheiss discloses the process of selecting television channels (column 6, lines 4-40). Schultheiss discloses the personal computer may control the tuning and other the functions according to the second embodiment (column 6, lines 63-67). Schultheiss discloses the second embodiment may be used for figure 2 to select channels using the remote control (column 7, lines 35-50). Schultheiss discloses the remote control sends signals to the personal computer (residential gateway) and the personal computer transmits the remote control signals and the video signals to the television (column 8, lines 3-16; figure 4); which meets the limitation on channel select commands received directly by a receiver within the residential gateway. Schultheiss discloses adding computing power would increase the cost of the television (column 1, lines 30-40). Schultheiss discloses it is an object of the invention to provide additional services without costly add on units without requiring memory and computing power added (column 1, lines 46-53). It would have been obvious to one of ordinary skill in the art to modify Ehreth to have a receiver in the gateway that receives channel change commands directly as taught by Schultheiss in order to provide additional services without requiring costly add on units to be added.

As previously disclosed, Schultheiss discloses the limitation of the gateway directly receiving signals. Neither Ehreth nor Schultheiss discloses an optical remote control device sending channel select commands to a television located in close proximity to the residential

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gateway being received directly. Hamlin discloses system controller 38 that has a signal transceiver 40 coupled to it that interacts with a remote controller 42 capable of being carried anywhere around the house (column 3, lines 13-23). Hamlin discloses the remote controller 42 can interact directly with the system controller 38 (column 5, lines 30-45) and the systems controller has various TVs and VCRs connected to it (column 5, lines 17-29). Hamlin discloses the remote control can control the different devices in various locations of the house (column 5, lines 46-60). Hamlin discloses device 46 can be a television (column 3, lines 13-18 and column 4, lines 27-32). Hamlin discloses the remote control can use an infrared signal (column 6, lines 8-17). Hamlin discloses the television 46 in the same room as the infrared receiver 40 (figure 1), which meets the limitation of an optical remote control sending channel select commands to a television located in close proximity to the residential gateway being received directly. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss to receive the channel select command at a receiver directly within the residential gateway as taught by Hamlin in order to provide versatility and mobility while communicating with the gateway.

Regarding claims 2, as previously disclosed, Schultheiss discloses directly receiving the signal at the gateway and Hamlin discloses the keypad 70 on the remote control 42 can be used to transmit signals via electromagnetic radiation such as infrared (optical) to the signal transceiver 40 coupled to the system controller 38 (residential gateway) (column 6, lines 8-17).

Regarding claim 3, Ehreth discloses communications controller 30 (residential gateway) that are connected to television sets and the user uses remote controls to send signals to the communications controller (column 3, line 35-column 4, line 23) and the communications

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controller retrieves the appropriate signals (column 4, line 24-column 5, line 14), which meets the limitation on televisions remotely located from the residential gateway over media connecting the remotely located televisions to the residential gateway; each television has a channel selector and signaling unit 50 associated with it (column 2, line 59-column 3, line 10 and figure 1). Ehreth discloses even though shown as a separate unit, the television set 100 and channel selector and signaling unit may be incorporated within or integrated into television set 100 (column 3, lines 2-3). Ehreth discloses the remote selector 70 can transmit infrared radiation to the channel selector and signaling unit 50 (column 3, line 65-column 4, line 7).

Regarding claim 9, the limitations in claim 9 have been met in claim 1 rejection. Ehreth discloses the additional limitation of a network interface module 32 (column 3, lines 11-34 and figure 1). Ehreth discloses the user can use a remote selector 70 to select channels (column 3, line 65-column 4, line 12). Ehreth discloses the channel selections are sent upstream to the communications controller 30 over network 90 and the communications controller coordinates to transmit information containing the selected video to the appropriate TV (column 4, lines 13-62). Ehreth discloses the network may provide all or only signals requested by communications controller 30 (column 3, lines 15-18), which meets the limitation on video signals correspond to the channel select commands. Ehreth discloses the network interface 32 can receive ATM cells carrying MPEG carrying video (column 3, lines 27-50). Ehreth discloses the network interface module 32 can convert ATM cells carrying MPEG encoded video into an analog format and the communications controller 30 includes a modulator for modulating the video signal into RF channels to the appropriate TV set (column 3, lines 27-50; figure 1), the conversion of digital video to analog and the modulation meets the limitation on a processor for processing the video

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signals to produce television signals. The definition of a bus is a conductor serving as a common connection in any high current application (Webster's New World Dictionary, Third College Edition 1988; page 188, definition #3). The network interface 32 disclosed by Ehreth inherently comprises a bus to transmit signals to the processor the converts digital to analog.

Regarding claim 16, neither Ehreth nor Hamlin discloses a 1 KHz signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Hamlin to have a 1 KHz signal.

Regarding claim 21, the limitations in claim 21 have been met in claims 1, 9 rejections.

Regarding claim 22, as previously disclosed in claim 1 rejection, Hamlin discloses the limitation on close in proximity via a connection. As previously disclosed, Ehreth discloses the television is connected to communication controller 30 (residential gateway) via a video system distribution network 90, which may be various types of media (column 3, lines 51-60). Neither Ehreth, Schultheiss, nor Hamlin discloses the media being S-video cables. The examiner takes Official Notice that media such as S-video cables are notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin to have S-video cables in order to provide better picture quality.

Regarding claim 24, the limitations in claim 24 have been met in claim 2 rejection.

Regarding claim 25, the limitations in claim 25 have been met in claim 3 rejection.

Regarding claim 29, as disclosed in claim 1 rejection, Ehreth discloses the television is connected to communication controller 30 (residential gateway) via a video system distribution network 90, which may be various types of media (column 3, lines 51-60). Neither Ehreth,

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Schultheiss, nor Hamlin discloses the media being S-video cables. The examiner takes Official Notice that media such as S-video cables are notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin to have S-video cables in order to provide better picture quality.

2. Claims 4-8, 11, 14, 15, 17, 20, 23, 26-28, 30-33, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehreth in view Schultheiss in further view of Hamlin in further view of Martin (US Patent # 5,500,691).

Regarding claim 4, Ehreth discloses the remote control 70 uses infrared radiation to send signals to the signaling unit 50 (optical receiver) (column 3, line 65-column 4, line 12). Additionally, Hamlin discloses an infrared signal is received at the signal transceiver and converted into an electromagnetic signal (column 6, lines 8-17), which meets the limitation on optical receivers. Hamlin discloses the signals from the remote are channel change commands (column 6, lines 29-45). Neither Ehreth, Schultheiss, nor Hamlin discloses the infrared signal being converted into a RF signal. Martin discloses an infrared signal received and converted into a RF signal where and the RF signal is sent to the television (column 3, lines 4-15), which meets the limitation on detecting, transmitting the pulse trains, and receiving. As stated in claims 1 and 3 rejections, Ehreth and Hamlin teach the signal sent from the remotely located television to the residential gateway, which meets the limitation on transmitting optical signals and transmitting the signals from the transmitter to the residential gateway. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of

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Schultheiss in further view of Hamlin to convert the infrared signal into a RF signal as taught by Martin in order to avoid line of sight communication in IR communications.

Regarding claim 5, Ehreth discloses the upstream signaling receiver 80 (remote antennae module) may be located at any other suitable location (column 4, lines 44-51). Ehreth discloses the distribution network 90 (media) connects the remote sites 104 (remotely located televisions, column 3, lines 7-10) to the upstream signaling receiver 80 (figure 1, column 3, lines 51-64).

Ehreth discloses the channel selection is sent from the signaling unit 50 (transmitter) to the upstream signaling receiver 80 (remote antennae module) (column 4, lines 24-43), which meets the limitation on receiving and extracting.

Ehreth discloses the communications controller 30 (residential gateway) communicates with the upstream signaling receiver (remote antennae module) in order to receive the signals and transmit them the user (column 3, lines 35-50). Martin discloses RF transmission.

Regarding claim 6, Ehreth discloses the video distribution network 90 is used for cable TV and that other types of transmission media may be used (column 3, lines 51-64). Neither Ehreth, Hamlin, nor Martin discloses the network media line being a coaxial cable. The examiner takes Official Notice that bi-directional being coaxial cables are notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin to have the bi-directional line be a coaxial cable in order to use the well-known coaxial cable to plug into well-known standard coaxial cable outlets.

Regarding claim 7, Ehreth discloses the upstream signaling receiver 80 (media interface device) may be located at any other suitable location (column 4, lines 44-51). Ehreth discloses

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the distribution network 90 (media) connects the remote sites 104 (remotely located televisions, column 3, lines 7-10) to the upstream signaling receiver 80 (media interface device) (figure 1, column 3, lines 51-64).

Ehreth discloses the channel selection is sent from the signaling unit 50 (transmitter) to the upstream signaling receiver 80 (media interface device) (column 4, lines 24-43), which meets the limitation on transmitting the signal, receiving, and extracting.

Ehreth discloses the communications controller 30 (residential gateway) communicates with the upstream signaling receiver (media interface device) in order to receive the signals and transmit them the user (column 3, lines 35-50). Martin discloses RF transmission.

Regarding claim 8, as previously disclosed in the Office Action, Ehreth, Hamlin and Martin disclose the optical signals being infrared.

Regarding claim 11, the limitations in claim 11 have been met in claim 4 rejection.

Regarding claim 14, the limitations in claim 14 have been met in claim 5 rejection.

Regarding claim 15, the limitations in claim 15 have been met in claim 6 rejection.

Regarding claim 16, the remote antennae module disclosed in the reference of Ehreth inherently extracts channel select commands at a frequency, however, the exact value of the frequency is undisclosed by Ehreth, Schultheiss, Hamlin, and Martin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin to have the channel select commands from the RF signals as 1 KHz signal or any other frequency in order to comply with different system configurations.

Regarding claim 17, the limitations in claim 17 have been met in claim 7 rejection.

Regarding claim 20, as disclosed in claim 7 rejection, Ehreth discloses the upstream signaling receiver 80 (media interface device) can be located in any other location or may be located within (column 4, lines 44-62), which meets the limitation on directly connected.

Regarding claim 23, the limitations in claim 23 have been met in claims 4-5 rejections.

Regarding claim 26, the limitations in claim 26 have been met in claim 4 rejection.

Regarding claim 27, the limitations in claim 27 have been met in claim 5 rejection.

Regarding claim 28, as disclosed by Ehreth, the upstream signaling receiver 80 (remote antennae module) can be located within the communications controller 30 (residential gateway) (column 44-51). The communications controller 30 is a media interface device and the upstream signaling receiver 80 (remote antennae module) is located within.

Regarding claim 30, the limitations in claim 30 have been met in claims 1, 3, 4, 5 rejections. Ehreth discloses the additional limitation of a telecommunications network that is connected to the communication controller 30 (residential gateway) (column 1, lines 44-60).

Regarding claim 31, the limitations in claim 31 have been met in claims 9 and 11 rejections.

Regarding claim 32, the limitations in claim 32 have been met in claim 14 rejection.

Regarding claim 33, the limitations in claim 33 have been met in claims 31 and 32 rejections.

Regarding claim 36, the limitations in claim 36 have been met in claim 28 rejection.

3. Claim 12, 13, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin in further view of Martinez (US Patent # 5,812,184).

Regarding claims 12, as disclosed in claim 4 rejection, Ehreth discloses an optical receiver. As disclosed in claim 4 rejection, Martin discloses an optical to electrical conversion device.

Neither Ehreth, Hamlin, Schultheiss, nor Martin discloses a bias switch turning on and off an oscillator and the oscillator producing a modulated RF signal and turning on and off in response to the switch. Martinez discloses the IR module 24 (optical receiver) sends the optical signal to an AND gate 59 (bias switch) and the signal is sent to the modulator 65 and oscillator 63 (column 9, lines 8-20, figure 6); the combination of the modulator 65, oscillator 63, and crystal 61 reads on the claimed oscillator that modulates a signal to produce an RF signal. The AND gate receives pulse trains from the optical receiver 24 that are logic high "1's" and output the logic high to the modulator 65 (part of the claimed oscillator) and the modulator 65, oscillator 63, and crystal 61 responds to the logic high pulse train and convert the signal into an electrical signal, which meets the limitation on the bias switch and the oscillator coupled to the bias switch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin to have a bias switch driving an oscillator in response to pulse trains as taught by Martinez in order to synchronize the oscillator to the pulse trains.

Ehreth discloses the upstream signaling receiver 80 in the communications controller 30 (residential gateway) and there is upstream and downstream signals traveling between the channel selectors and signaling units 50 and the communications controller 30 (residential gateway) (column 3, lines 35-64). Neither Ehreth, Schultheiss, Hamlin, nor Martin discloses a diplexer. Martinez discloses the TRM 22 connects to the television (column 8, lines 21-41;

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figures 4, 5). Martinez discloses an isolator 47 (column 9, lines 8-20), which meets the limitation on a diplex filter injecting in the direction of the residential gateway. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin to a diplexer as taught by Martinez in order to ensure the signals go in the proper direction.

Regarding claim 13, Martinez suggests an attenuator with the disclosure of an isolator 47 (column 9, lines 8-20); an isolator is a form of an attenuator. Neither Ehreth, Schultheiss, Hamlin, Martin, nor Martinez discloses an attenuator between the diplexer filter and the oscillator. The examiner takes Official Notice that attenuators are notoriously well known in the art for attenuating a signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin in further view of Martinez to have a attenuator between the oscillator and the diplexer filter in order to limit the signal coming into the oscillator to prevent the diplexer filter from injecting too large of a signal to the residential gateway.

Regarding claim 34, the limitations in claim 34 have been met in claim 12 rejection.

Regarding claim 35, the limitations in claim 35 have been met in claim 13 rejection.

4. Claim 18, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin in further view of Budow (US Patent # 5,521,631).

Regarding claim 18, Ehreth discloses the upstream signaling receiver 80 in the communications controller 30 (residential gateway) and there is upstream and downstream signals traveling between the channel selectors and signaling units 50 and the communications

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controller 30 (residential gateway) (column 3, lines 35-64). Neither Ehreth, Schultheiss, Hamlin, nor Martin discloses a diplexer. Budow discloses a diplexer located within a room terminal 15 (residential gateway) (column 14, lines 34-43). Budow discloses a diplexer 405 is used to pass the television signals (other signals) directly to the TV (column 14, lines 44-50, figure 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin to have a diplexer in the residential gateway as taught by Budow in order to pass the television signals directly to the TV.

Regarding claim 37, the limitations in claim 37 have been met in claim 18 rejection.

5. Claim 19, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin in further view of Budow in further view of Flickinger (US Patent # 5,901,340).

Regarding claim 19, neither Ehreth, Schultheiss, Hamlin, Martin, nor Budow discloses a balun. Flickinger discloses a wall outlet (residential gateway) comprising of a balun that impedance matches (column 3, lines 7-20). Flickinger discloses in addition to receiving video signals from the VCR 24, the classroom receives video signals from an external source (column 3, lines 38-49). Flickinger discloses that coaxial cables or fiber optic cables or baluns for twisted wire pair can be used interchangeably (column 3, lines 20-37); the selected (subset) video signals going into the video wall outlet (residential gateway) are impedance matched by the balun. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ehreth in view of Schultheiss in further view of Hamlin in further view of Martin in

further view of Budow to have a balun as taught by Flickinger in order to impedance match the signals.

Regarding claim 38, the limitations in claim 38 have been met in claim 19 rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 39, 41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Martinez.

Regarding claim 39, Martinez discloses the IR module 24 (optical receiver) sends the optical signal to an AND gate 59 (bias switch) and the signal is sent to the modulator 65 and oscillator 63 (column 9, lines 8-20, figure 6); the combination of the modulator 65, oscillator 63, and crystal 61 reads on the claimed oscillator that modulates a signal to produce an RF signal. The AND gate receives pulse trains from the optical receiver 24 that are logic high “1’s” and output the logic high to the modulator 65 (part of the claimed oscillator) and the modulator 65, oscillator 63, and crystal 61 responds to the logic high pulse train and convert the signal into an electrical signal, which meets the limitation on the optical receiver and the oscillator coupled to the bias switch. Martinez discloses the TRM 22 connects to the television (column 8, lines 21-41; figures 4, 5). Martinez discloses an isolator 47 (column 9, lines 8-20), which meets the limitation on a duplex filter injecting in the direction of the residential gateway.

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Regarding claim 41, Martinez discloses the TRM 22 (optical conversion device, figures 6 & 4) is connected to a TV via converter box 18 and the user can use remote control 20 (column 8, lines 21-41); the receiver 49 of the TRM 22 detects the channel in which the receiver is tuned (column 8, lines 42-64), which meets the limitation on controlling the channel selection with the remote control.

Regarding claim 42, Martinez discloses the RF carrier generated by the oscillator 63 and crystal 61 is sent downlink on the cable 7 (media) via isolator 47 (diplexer filter) (column 9, lines 8-20). Martinez discloses the cable 7 connects to the CATV converter (figure 6) and the CATV converter is placed on top of the TV (figure 4) and receives signals from a network (figure 5), which meets the limitation on the diplexer filter injects the RF signal onto the media in the direction of the direction of a residential gateway that controls communications between the television and a telecommunications network.

Regarding claim 43, Martinez discloses the stand-alone response module 22 is placed on top of TV and uses a coaxial cable (figures 4, 5; column 8, lines 22-41).

Regarding claims 44, the limitations in claim 44 have been met in claims 39, 41-43 rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 40, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez.

Regarding claim 40, Martinez fails to disclose an attenuator connected between an oscillator and diplexer. The examiner takes Official Notice that attenuators are notoriously well known in the art for attenuating a signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martinez to have a attenuator between the oscillator and the diplexer filter in order to limit the signal coming into the oscillator to prevent the diplexer filter from injecting too large of a signal to the residential gateway.

Regarding claim 45, the limitations in claim 45 have been met in claim 40 rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Chung whose telephone number is (703) 305-7362. The examiner can normally be reached on M-F, 7:30AM-5:00PM.

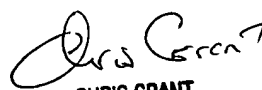
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew I. Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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